Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Office of Engineering and	)	
Technology Seeks Comment On	)	ET Docket No. 19-48
Modifying the Equipment Authorization	)	
Rules to Reflect the Updated Versions	)	
Of the Currently Referenced	)	
ANSI C63.4 and ISO/IEC 17025	)	

Comments of Teradata Corporation

Introduction

Teradata Corporation thanks the Commission for the opportunity to comment on updating the Code of Federal Regulations references to reflect the current versions of ANSI C63.4 and ISO/IEC 17025. Teradata manufactures and sells Information Technology (IT) equipment worldwide. Teradata maintains an on-premises ISO 17025 accredited test lab, that includes a weather-protected OATS, to certify its products to worldwide EMI/EMC requirements. Teradata relies on the Commission's rules in operating and calibrating its onsite test facility, as well as in ensuring products meet emissions requirements for unintentional radiators to be offered for sale. Teradata maintains ISO accreditation for its on-premises test lab. We support the incorporation of ISO/IEC 17025:2017 into the Commission's rules, and we oppose the incorporation of ANSI C63.4a-2017.

Teradata fully supports the introduction of the accreditation requirements defined in ISO/IEC 17025:2017. As the Commission noted, the 2017 version of the ISO standard,

including its performance-based requirements, provides greater flexibility in addressing processes, procedures, documented information and organizational responsibilities relative to the prior version of the standard. We therefore support the update to the Part 2 rules to reference ISO/IEC 17025:2017.

Teradata opposes the incorporation of ANSI C63.4a-2017 into the FCC rules. Teradata does not see significant technical justification for adopting ANSI C63.4a-2017. It does not address any apparent failures in the current Normalized Site Attenuation (NSA) method. It encourages further divergences between ANSI and CISPR methods in the future. It will impose additional ongoing costs on many laboratories in terms of both time and money. It could impose significant retrofit costs to existing sites if they fail the NSA using the method in the proposed amendment. We urge the FCC to reject this amendment. If the FCC chooses to adopt ANSI C63.4a-2017 into its rules, the transition period should be at least three years.

Radio spectrum does not appear to be in jeopardy using the currently NSA methods

There has been no indication from the FCC that there are significant numbers of products which have test results showing compliance but where subsequent market surveillance shows non-compliance which can be attributed to inadequacy of the current site validation methodology (i.e. significant number of labs "passing" actual failing products, traceable to the current NSA method). There is no indication that the users of the radio spectrum are experiencing interference from products tested to the current FCC rules at test sites using the current NSA method. Hence, protection of the radio spectrum does not appear to be a justification for incorporating ANSI C63.4a-2017 into the FCC rules.

Causes further divergence between the ANSI and CISPR NSA methods

Prior to the publication of ANSI C63.4:2014, both the ANSI and CISPR NSA methods for measurement of NSA were the same. ANSI C63.4:2014 introduced "geometry specific correction factors" (GSCF) for biconical antennas. The proposed amendment expands the use of GSCF to all antenna types used for NSA and requires the use of two "identical" antennas. For alternative sites (sites described in 5.4.2 of ANSI C63.4-2014) the proposed amendment changes the maximum height to a value dependent on the size of the EUT, with a minimum of 2m and a maximum of 3m.

These changes take the ANSI method and the CISPR method further apart. To show compliance with both the ANSI method and the CISPR method will now require two sets of calculations be made, rather than one. Labs will have to develop, validate and maintain two separate NSA calculation schemes (whether that be in-house developed test software, commercially available software, spreadsheets, etc.)

By requiring a potentially different maximum height, 50% more data may need to be collected (2m height required by CISPR, and "maximum EUT height or 3m" for the proposed amendment). This is a non-trivial task for alternative sites.

While the radiated emissions (RE) test method for IT equipment in the FCC/ANSI C63.4 and CISPR22/32 methods are identical, the NSA methods for qualifying the test site would now be different and could lead to the potentail result of the same physical site being satisfactory for one RE method, but not so for the other.

A goal of the FCC should be to harmonize the ANSI and CISPR methods as much as possible and appropriate. This amendment causes further divergence of the two methods and is

hence undesirable. This is a significant reason to reject incorporating ANSI C63.4a-2017 into the FCC rules.

Imposes additional ongoing equipment costs on laboratories

The required use of GSCF for all antennas for NSA measurements increases calibration costs to laboratories. GSCF requires additional calibration above the current "near free space antenna factors" (NFSAF) used for emissions measurements. Calibration for GSCF requires that a pair of (nominally) identical antenna be calibrated together. This calibration is more time consuming and costly than for NFSAF, because data must be taken for 4 specific geometries.

Labs which do not have two identical antennas will need to purchase them, for no other reason than to make the NSA measurements in accordance with the proposed amendment. Labs which do have two identical antennas will not have them available for the duration of the calibration, which may require them to purchase additional antennas to remain operating while the pair is calibrated. These additional expenses are hard to justify given that the current NSA methods do not appear to be inadequate.

In contrast, the CISPR NSA method has no requirements for nominally identical antennas, nor the use of GSCF for the antennas used. Indeed, for years, many labs have been performing NSA using NFSAF and two different models of antennas, with satisfactory results.

The increased calibration costs and the likely increased equipment costs (new antennas) for questionable benefit is another reason to reject adopting ANSI C63.4a-2017 into the FCC rules.

Could impose potentially large retrofit costs on laboratories

Laboratories could face significant retrofit or replacement costs should their site fail to meet the new NSA requirements. Most labs would categorize this type of work as a capital

project, which generally requires that it be budgeted. In addition to the capital cost, projects of this type could take more than a year to complete from inception, to the requests for bids, bid selection, contract negotiation, permitting, and finally the actual work. While the site is under re-construction, it is unavailable for testing. The lab would either have to forgo work, or possibly subcontract work for the duration of the re-construction, both of which cause additional financial hardship above the re-construction costs.

These costs would be incurred simply because the site does not meet the NSA requirements of the proposed amendment. There is no empirical evidence that these sites are deficient now. Imposing large real costs on labs to satisfy some theoretical imperfection in a method that has been shown to be satisfactory for decades cannot be justified.

Incurring potentially significant laboratory test site retrofit costs due to rules changes should be avoided unless there are significant technical reasons to require the rules change. No significant technical reason exists. For this reason, ANSI C63-4a-2017 should not be incorporated into the FCC rules.

Respectfully submitted,

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